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ABSTRACT

To document the writing practices, opinions, and perceptions of a particular segment of professionals in the work force, a study surveyed Department of Defense middle managers working for the United States Air Force. Self-report questionnaires were completed by 234 middle managers who had completed a one-week formal in-house writing program, and by 124 who had not. The survey results indicated that (1) respondents spent between 25% and 40% of a typical workday in writing activities; (2) the most useful instruction for their current writing was informal on-the-job training; (3) 21% of those who had completed a formal in-house writing program chose it as the most useful instruction for current writing; (4) 56% of respondents listed English composition courses or technical writing courses as the best elements of their educational backgrounds in preparing them for current job writing; (5) 43% believed they had problems writing on the job; (6) there appeared to be an equal place for both on-the-job training and more college level/formal writing courses; and (7) respondents identified purpose of message, audience analysis, organizing for writing, grammar and syntax, and mechanics as the most important writing skills. (Six tables of data are included, and 13 references are attached.) (SR)

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On the Job Writing: Quality and Quantity in Selected Department of Defense Professionals

by
Carl L. Davis and Freda F. Stohrer

Introduction

Research on writing in the work place has progressed fairly rapidly in the last fourteen years. There appear to be two distinct types of inquiry that have evolved. The first involves an assessment of the amount of writing done in the public and private sector which analyzes who writes what to whom, when, and why (Lauer et al., 1985; Odell and Goswami, 1985; Pianko, 1979, Halpern, 1985; Paradis et al., 1985). The other source of research is more quantitative or experimental, where amount of time writing, the composing process, and needed writing skills are documented from self-reports, observations, and interviews (Anderson, 1985); the types of training that helped develop writing skills are detailed (Bataille, 1982); how individuals compose at work is described (Selzer, 1983; Odell, 1985); and the process of composing on the job is analyzed (Flower and Hayes, 1980; Matsuhashi, 1981).

The authors became interested in writing at the work place as a result of informal critiques our students had written at the conclusion of an in-house one week writing course. These students were full time working professionals who were not writers by training or education. They were mostly middle managers, working for the United States Air Force. These

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professionals indicated they were doing "significant" amounts of writing on the job and they needed additional help with their writing. A review of the applicable literature revealed a dearth of specific studies concerning the writing habits of Department of Defense (DOD) personnel on the job despite the fact that DOD is one of the largest employers in the United States. Thus, while research has helped experts assess the amount of writing done and how it is done, we must continue to assess all aspects of the writing world and document those areas or elements of writing that specific segments need improving before comprehensive strategies can be identified and developed to improve on the job writing for everyone. This article further documents the writing practices, opinions and perceptions of a particular segment of professionals in the work force.

Method

Sample. Using Anderson's framework as a guide (1985), the target population was restricted to Department of Defense middle managers working for the United States Air Force. Middle managers were chosen to accentuate the effects of work experience and thus opportunity to write on the job while insuring the population under study had the writing experiences on the job necessary to completely evaluate their writing proficiency and writing habits. In addition, Anderson reported conflicting results concerning organizational level and time spent writing (Anderson, 1985, P. 35). Middle managers in DOD have experienced

some advancement and thus would seem to be less affected by either direction of the conflicting studies noted by Anderson.

Two types of respondents were sought, those who had completed some type of formal in house writing program and those who had not. The two groups were both compared and aggregated to determine the amount of writing they did on the job; the kinds of writing they performed; the importance they attach to their on-the-job writing; the types of education/training which had been most helpful to them for on-the-job writing; what writing problems have concerned them on the job; and what implications for teaching arise from the results. When the two sample groups differed in their perceptions or opinions, those differences are noted.

Two sampling plans were used. A census was taken of all students who had completed a 40 hour technical writing course offered by the Air Force Institute of Technology (AFIT) in 1986 or 1987 at Air Force based throughout the continental United States. Those years were selected because individual names of all students could be accurately matched with base affiliation. The census contained 304 cases. Students enrolled in professional continuing education courses taught over a two week period at AFIT yielded a convenience sample of 145 cases. These individuals had not completed any in house writing course. All respondents were middle managers who worked full time for the Department of Defense. When the two groups differed in their perceptions or opinions, those differences are noted.

Measures. A self-report survey questionnaire was developed by the authors. It consisted of demographic questions on age, educational status, military or civilian pay grade, sex, educational experience, academic background, and job requirements. A series of multiple choice questions sought information on writing responsibilities on the job. A series of questions using a seven point agree/disagree response scale determined attitudes about writing abilities, writing in the work place, and asked for opinions on course components/elements which may have contributed to writing skill development. Another five point response scale sought degree of concern for selected writing problems as well as importance of the same group as skills to effective writing. Two open-ended questions were offered for listing skills important to designing a writing course as well as to provide an opportunity to describe other writing concerns.

Procedure. Surveys for the 304 respondents in the census were administered through the mail while the convenience sample was administered during class. Each respondent was given a questionnaire with instructions, an answer sheet and a return envelope. Participation was voluntary. Response rates were 77% (234 usable cases) for sample one and 84% (124) for sample two.

Results

Since the survey instrument attempted to provide a measure of how much and the kinds of writing done, the impact of

potential contributors to writing success, and an analysis of potential problems/skills, alpha analysis was conducted on all three of the above factors in both samples. Cronbach Alpha analysis yielded six reliability statistics. Measuring how much and the kinds of writing was determined by nine items (alpha = .65 and .64), the impact of potential contributors utilized 19 items (alpha = .69 and .70) and the analysis of potential problems/skills used 13 items (alpha = .90 and .89).

Table 1 summarized the demographic information on all 348 respondents. The "typical" DOD employe is a male civilian between the ages of 31 and 40, with a bachelor's degree in a non technical area, who has served in his present position for less than 3 years, and who has completed at least one writing course in college. The two samples were comparable demographically. In addition, 65% of all respondents had worked more than seven years for the federal government. Thirty-five percent listed their primary academic backgrounds as technical, while 46% listed their primary academic background as non technical and 29% classified their current job as technical in nature while 46% classified their jobs as non technical. Twenty percent classified their current jobs as both technical and non technical.

Writing Responsibilities at Work. Table 2 shows the parts of a typical workday respondents spent planning, preparing, and organizing for writing, writing, and proofreading, revising or rewriting their documents. Using the midpoint or median as the

Table 1

Demographic Information

Attribute / Category		Frequency / Percent	
Age			
	20 to 30	106	30
	31 to 40	120	35
	41 to 50	87	25
	51 to 60	35	10
Sex			
	Male	255	73
	Female	93	27
Classification			
	Civilian	214	61
	Military	134	39
	(Officers)	(87)	(65)
	(Enlisted)	(47)	(35)
Degree			
	None	98	28
	Associate	38	11
	Bachelor	164	47
	Master	48	14
College Composition Courses			
	Yes	249	72
	No	99	28
Years in Present Position			
	Less than 1	79	23
	1 to 3	158	45
	3 to 5	74	21
	More than 5	37	11

"average" time for each activity, respondents spent 31-45 minutes daily planning, preparing, and organizing for writing, 46-60 minutes daily actually writing, and 31-45 minutes revising and rewriting their documents. Thus, in an eight hour workday, these respondents spent from 22% to 31% of a typical day engaged in prewriting, writing, and revising activities for their own documents. As noted in Table 2, there were a significant number

of respondents who spent much more time in writing activities than the "average", and the range of time spent writing varied widely among respondents.

Table 2

Prewriting/Writing/Revising

Time (In Minutes)	% Planning	% Writing	% Rewriting
Under 15	20	8	24
15 - 30	24	17	24
31 - 45	13	12	21
46 - 60	13	18	15
61 - 90	7	15	6
91 - 120	8	12	5
Over 120	15	18	5

The authors also documented that part of a typical workday where respondents reviewed, revised, or actually rewrote documents with someone else. Those activities are summarized in Table 3.

Table 3

Writing with Someone Else

Time (In Minutes)	% Writing	% Revising/Reviewing
Under 15	59	40
15 - 30	19	20
31 - 45	8	14
46 - 60	8	8
61 - 90	3	8
91 - 120	1	3
Over 120	2	7

The data indicate that respondents spend less that 15 minutes per day engaged in proofreading, revising, and rewriting activities with someone else and between 15-30 minutes reviewing the writing of others. That is an additional 3% to 9% of the typical workday where writing activities with someone else are accomplished. Additionally, the data show the majority of respondents (64%) spend less than 10% of their writing time in collaboration with others while 45% (155) noted that more than 75% of their writing is their sole responsibility. One reason for this could be that 82% noted it is easier for them to write by themselves. Word processors or computers appear to have made that task easier. Much of the on-the-job writing of these respondents is done on a word processor or computer. Ninety percent of the respondents had access to a word processor or computer and 55% used one daily for their writing activities on the job. Respondents reported using the word processor or computer for all writing processes from drafting to revising.

The most useful instruction for their on-the-job writing is presented at Table 4. Since there were significant differences in how the two samples perceived their most useful instruction, both sample results are presented in Table 4. Both samples believed on-the-job training was most useful to them for the writing they do on the job. Sample 1 respondents perceived the formal government sponsored course as significantly more important than sample 2 respondents. This difference was

expected since sample 1 respondents had attended a one week government sponsored writing course while Sample 2's government sponsored courses had not yet included a formal writing course.

Table 4

Most Useful Instruction for Current On the Job Writing

	Instruction	Percent
Sample 1	On The Job Training (Informal)	30
	Formal Government Sponsored Courses (Writing)	21
	College English Courses	21
	High School English Courses	10
Sample 2	On The Job Training (Informal)	42
	College English Courses	27
	Formal Government Sponsored Courses (Non Writing)	13
	High School English Courses	13

There is evidence from this data that the respondents remember favorably those writing courses they had attended most recently. It may be equally significant to note that while 70% of the respondents were above age 30, college English courses were still perceived as having played a significant role in the learned writing skills of these "non-writing professionals". When specific elements of educational backgrounds were probed to determine courses or course components which best prepared respondents for on-the-job writing, 39% listed English composition courses, 17% noted technical writing courses, 12% said logic courses, 10% noted their specific technical or professional specializations, another 7% suggested their co-op internships or work study experiences, 6% opted for speaking

courses, and 4% said literature courses best prepared them for on the job writing. The remaining percentages were scattered among numerous other courses. Thus, components of typical English composition courses are perceived as having a greater impact on preparing these respondents for writing on the job than any other preparatory course or course/component the authors listed.

Writing Problems

An overwhelming 95% of those respondents felt writing skill were very important to their present jobs and 77% believed the ability to write in the work force in general is important. However, 50% of the respondents noted they had writing difficulties when they entered the workforce, and 43% believed they needed to improve their writing abilities today. Thus, while these respondents perceive their writing skills have improved since they began working, many believe they can still improve their on the job writing.

Two similar lists of written communication skills were presented to the respondents. The first listed asked respondents to rate their degree of concern for each skill on a scale from not a problem to a problem of overwhelming concern. The second list asked respondents to rank order the skills in order of importance to writing in the work place. Thus, two dimensions of specific writing skills were examined: 1) the degree each skill was a problem for respondents; and 2) each respondent's perception of relative importance of the skills independent of

how well each respondent had mastered the skills. Table 5 shows the aggregated responses concerning the problems respondents had with various elements/components of writing. From the "major problem" and "overwhelming problem" categories, the most significant writing problems for these respondents appear to be dealing with time constraints, group communication skills, determining a clear statement of purpose of message, and grammar and syntax.

Table 5

Writing Problems

	Percent of Respondents			
Problem	Not a Problem	A Minor Problem	A Major Problem	An Overwhelming Problem
Dealing with Time Constraints	28	36	27	9
Group Communication Skills	34	33	26	7
Clear Statement of Purpose of Message	40	27	22	11
Defining Data Requirements	32	36	25	7
Grammar and Syntax	32	35	28	5
Knowing the Reader	31	37	25	7
Mechanics (punctuation abbreviations, capitalizations)	36	36	24	4
Organizing Material	40	34	22	4
Formatting	37	38	21	4
Style	40	40	17	3
Word Processing Skills	52	28	14	6
Revising	46	36	15	3
Use of Graphics	51	31	14	4

Table 6 shows the ranking of written communication skills from (1) the most important to (10) the least important of this group. Since the two samples did differ here, ranking of both

samples are presented. Those respondents who had completed the government sponsored writing course gave greater importance to grammar and syntax. One reason for this is that grammar and syntax exercises are emphasized in that course. However, the same top five written skills appear in both samples, clear statement of purpose of message, grammar and syntax, mechanics, including punctuation, abbreviations, capitalization, knowing the reader, and organization.

Table 6

Importance of Written Communication Skills

Rank	Sample 1	Rank	Sample 2
1	Clear Statement of Purpose of Message	1	Clear Statement of Purpose of Message
2	Grammar and Syntax	2	Knowing the Reader
3	Organizing Material	3	Organizing Material
4	Knowing the Reader	4	Grammar and Syntax
5	Mechanics	5	Mechanics
6	Style	6	Style
7	Revising	7	Formatting
8	Use of Graphics	8	Revising
9	Formatting	9	Use of Graphics
10	Word Processing Skills	10	Word Processing Skills

Paired-samples t-tests were conducted to compare the two samples with each other. No significant difference in the amount of time the two samples spent writing on the job was found ($t=.48$, $df=347$, $p=.63$). No significant difference was found between the two samples concerning the impact of potential contributors to writing effectiveness ($t=.61$, $df=347$ $p=.54$). There were significant statistical differences in the two samples concerning the importance they attached to potential writing problems ($t=2.46$ $df=347$ $p=<.02$).

Independent-samples t-tests were conducted to compare the aggregated responses of both samples on those single variables where the paired t-tests revealed no significant differences between samples. T-tests were conducted to compare aggregated responses based upon years the respondents had spent in their present positions, i.e., less than three years versus more than three years. The data showed that those respondents who had spent greater than three years in their current jobs spent significantly more time writing on the job (1-1/2 hours daily) than those respondents who had been on the job less than three years (46-60 minutes daily). ($t=2.34$, $df=346$, $p<.02$) Also, those respondents with more than three years in their current positions spent significantly more time planning, preparing, and organizing for writing daily (46-60 minutes daily versus 31-45 minutes daily, $t=2.65$, $df=346$, $p<.009$, and 31 to 45 minutes daily proofreading, revising, or rewriting documents as opposed to 15 to 30 minutes for those respondents who had less than 3 years. ($t=2.16$, $df=346$, $p<.03$) Thus, those respondents have greater than three years on the job spent approximately 9% more of their typical workday engaged in writing activities. There was also a significant difference in the collaborative writing efforts of the two groups. Those with less than three years service spent 11-20 percent of their writing time in collaborative efforts while the group with greater than three years service spent 1-10% of their time engaged in some form of collaborative writing ($t=-2.34$, $df=346$, $p<.02$).

Comparisons were also made based upon the respondents primary academic background, i.e., technical vs non-technical backgrounds. Respondents with a non technical background tended to use a word processor or computer at work less frequently than those with a technical background ($t=-1.93$, $df=346$, $p<.05$); technical backgrounds tended to choose technical writing courses and technical or professional specializations as those elements which best prepared them for current writing on the job while non techs overwhelmingly chose English composition courses ($t=-2.61$, $df=346$, $p>.01$); non techs had significantly less difficulty learning to write for their first employers ($t=1.93$, $df=346$, $p<.05$); non techs reported significantly more benefit in literature courses helping them to learn to write effectively ($t=-1.97$, $df=346$, $p<.05$); non techs noted that learning vocabulary was significantly more important to effective writing ($t=-2.48$, $df=346$, $p<.01$); writing style was reported as more of a problem to those with technical degrees ($t=1.99$, $df=346$, $p<.05$), and style was ranked more important as a skill (4th) than with the non techs (6th); and techs reported determining a clear statement of purpose of message as significantly more of a problem than non techs ($t=2.01$, $df=346$, $p<.04$).

Independent t-tests were computed to compare those respondents who had at least a masters degree with those respondents with less than that. Results showed those with less than a masters degree did significantly more collaborative writing ($t=2.11$, $df=346$, $p<.04$); those with at least a masters

degree noted on-the-job training gave them the most useful instruction for writing on the job, while those respondents with less than a masters chose college English courses ($t= 2.01$, $df=346$, $p<.05$); those with less than a masters strongly agreed with the statement that college writing courses taught them effective writing skills required by their jobs while the masters and above group neither agreed nor disagreed ($t=2.74$, $df=346$, $p<.02$); it is much easier for the masters and above group to write by themselves ($t=2.45$, $df=346$, $p<.02$); and formatting ($t=2.34$, $df=346$, $p<.03$), and use of graphics ($t=2.35$, $df=346$, $p<.03$) gave the group with less than a masters degree significantly more trouble than the group having at least a masters degree. Given the number of differences in the t-tests versus the size of the effects and the number of t-tests performed i.e., 25, it is likely some of the reported differences are statistical aberrations.

Conclusions

There are a number of important conclusions that can be drawn from this study.

1. On-the-job writing is a major activity of these respondents. They spend between 22% and 31% of a typical workday engaged in writing activities on various documents of their own. They spend an additional 3% to 9% daily engaged in writing activities for someone else or with someone else. Thus, 25% to 40% of a typical

work day is spent in writing activities, a substantial amount of time.

2. The most useful instruction for their current on the job writing is on the job training accomplished informally with supervisors/coworkers. On-the-job training is both difficult to define and hard to quantify. It may be that if respondents do not remember specific structured instruction, they assume learning happened through on-the-job training. It may also be that when individuals can no longer take structured course, they must learn on the job. Instruction then comes from their colleagues and supervisors when they need it. Thus, on-the-job training is not comparable to structured academic type courses, but takes place in the absence of them.

3. With sample 1 respondents, a formal government sponsored writing course of one week duration was chosen by 21% as containing the most useful instruction for current writing. This suggests that formal sponsored writing courses can be useful and may deserve additional studying. Informal on-the-job training was viewed as less significant for respondents who had attended the one week government writing course than for respondents who had not. Since on-the-job training in writing was so important to these respondents, additional on the job experiences in the problem areas detailed by these respondents would probably benefit them.

4. College writing courses/course elements played a significant role in on the job writing preparation. Fifty-six percent listed English composition courses or technical writing courses as the best elements of their educational background in preparing them for current on-the-job writing. As a source of knowledge about writing, components of formal writing courses appear to be far superior to any other learning experience in writing.

5. Nearly half of the respondents perceived individual writing problems when they entered the workforce but four out of ten still believe they need to improve their writing skills. Thus, on-the-job training is not fulfilling the need. There does appear to be a gap between the writing training they need and what they get. OJT and experience moderate the gap between where they are and where they want to be to some extent. Nevertheless, a significant group of these respondents (43%) generally believe they have problems writing on the job. We suggest this gap could be reduced by a closer working relationship between DOD's writing professionals and top level management. Clearly, more formal writing courses seem to be needed. Management should consider making funds available for selected personnel to enroll in formalized government sponsored writing training through the Air Force Institute of Technology.

6. There appears to be an equal place for both on-the-job training and more college level/formal writing courses. On the job training could focus on time constraint problems on the job, and defining data requirements and group communication skills,

while the formal courses should continue to focus on those components/elements identified by these respondents, i.e., purpose of message, grammar and syntax, mechanics, and organizing skills.

7. Purpose of message, audience analysis, organizing for writing, grammar and syntax, and mechanics were identified as the most important writing skills for these respondents. It appears these respondents want specific information about the workings of the language. They perceive errors in larger elements of sentence structure, as well as the smaller details of mechanics and usage as problems.

References

Anderson, P.V. "What Survey Research tells us about Writing at Work," Writing in Nonacademic Settings, edited by Lee Odell and Dixie Goswami, New York: The Guilford Press, 1985.

Bataille, R.R. "Writing in the World of Work: What our Graduates Report," College Composition and Communication, 33(3), 226-283.

Dominowski, R.L. Research Methods. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1980.

Eurich, N.P. Corporate Classrooms: The Learning Business. Princeton, N.J.: The Carnegie Foundation for the Advancement of Teaching, 1985.

Flower, L., and Hayes, J.R. "The Cognition of Discovery: Defining a Rhetorical Problem," College Composition and Communication, 31, 31-32 (1980).

Halpern, J.W. "An Electronic Odyssey," Writing in Nonacademic Settings, edited by Lee Odell and Dixie Goswami, New York: The Guilford Press, 1985.

Lauer, Janice M. et al. Four Worlds of Writing. New York: Harper and Row, Publishers, Inc., 1985.

Matsuhashi, A. "Pausing and Planning: The Tempo of Written Discourse," Research in the Teaching of English, 15, 113-134 (1981).

Odell, L. "Beyond the Text: Relations between Writing and Social Context," Writing in Nonacademic Settings, edited by Lee Odell and Dixie Goswami, New York: The Guilford Press, 1985.

Odell, Lee and Goswami, Dixie, eds. Writing in NonAcademic Settings. New York: The Guilford Press, 1985.

Paradis, J. et al. "Writing at Exxon ITD: Notes on the Writing Environment of an R & D Organization," Writings in Nonacademic Settings, edited by Lee Odell and Dixie Goswami, New York: The Guilford Press, 1985.

Pianko, Sharon. "Reflection: A Critical Component of the Composition Process," College Composition and Communication (October 1979), pp. 275-278.

Selzer, J. "The Composing Process of an Engineer," College Composition and Communication, 34, 178-187 (1983).